Decision

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Joint Application of Southern California Gas Company (U 904 G) and San Diego Gas & Electric Company (U 902 M) for Authority to Continue Funding of LEV Programs.	Application 02-03-047 (Filed March 25, 2002)
Application of Southern California Edison Company (U 338-E) to Extend the Operation of its Electric Vehicle Adjustment Clause Mechanism and Related Accounts Until the Date of the Commission's Final Decision in SCE's Test Year 2003 General Rate Case Proceeding.	Application 02-03-048 (Filed March 25, 2002)
Application of Pacific Gas and Electric Company for Review of and Authorization for Recovery of Costs Relating to Its Low-Emission Vehicle (LEV) Program for 2002 through 2005. (U 39 E)	Application 02-03-049 (Filed March 25, 2002)

DECISION ON FUNDING FOR LOW-EMISSION VEHICLE PROGRAMS

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DECISION ON FUNDING FOR LOW-EMISSION VEHICLES

I. Summary

This decision acts on the applications of Southern California Gas Company (SoCalGas), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and Pacific Gas and Electric Company (PG&E) (collectively, utilities or IOUs) for funding of the discretionary aspects of their Low-emission Vehicle (LEV)[1] programs.

The ratepayer-funded LEV activities addressed in this decision break down into four key areas. First, the IOUs share information they have gained as operators of their own LEV fleets with other actual or potential fleet owners, along with information on applicable rates and available saving, such as reduced costs for off-peak charging of electric vehicles. This information sharing is the key focus of the IOUs' "customer education" activities. Second, they evaluate new LEV products to determine their impact on the energy grids they operate. Third, they provide information and training on safe fueling and charging techniques to third parties who use IOU-owned fueling stations and charge electric vehicles. Fourth, they conduct research and development (RD&D) related to LEVs and LEV technology application assessments.

We continue to support the environmental benefits of programs designed to develop and support motor vehicles powered by electricity and natural gas and IOU LEV program expenditures which advance these goals. However, we cannot approve funding for LEV program activities that do not directly benefit

[1] For the purposes of this decision, LEV also refers to zero-emission vehicles (ZEVs).

ratepayers in the form of safer, more reliable or less costly utility service[2] or that contravene our previous decisions. We also wish to ensure that IOU LEV program expenditures are reasonable, cost-effective, and do not duplicate other public and private sector efforts.

We grant the applications of the IOUs for safety-related programs in full and authorize funding of certain customer education, system reliability, and RD&D programs upon approval of advice letters filed by the IOUs. These advice letters shall clarify funding requests and the relationship of the programs to the provision of safe, reliable and less costly utility service.

We also grant funding for PG&E's participation in the California Fuel Cell Partnership because this program will enable PG&E to assess the impact of fuel cell vehicles, an emerging trend in LEV technology, on PG&E's utility system and therefore directly relates to the provision of reliable utility service.

We deny funding for PG&E's and SoCalGas' participation in a natural gas liquifier project demonstration (the INEEL project) because this project involves development of a commercial product with ratepayer funds, in contravention of our previous decisions.

In some instances, the evidence submitted by the IOUs in support of their applications is somewhat vague and that more specific, detailed information about LEV program activities, expenditures, and accomplishments would better help us to evaluate whether program objectives have been met. We will therefore prospectively require the IOUs to file quarterly reports on LEV program expenditures with the Commission, as discussed below.

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[2] Public Utilities Code Section 740.8. All subsequent Code references are to the Public Utilities Code, unless otherwise stated.

We also note that other public agencies, including the California Energy Commission (CEC) and the California Air Resources Board (CARB), support funding of IOU LEV programs in order to reduce air pollution and related health problems and to reduce our economy's dependence on petroleum and foreign oil. In addition, the CEC has requested the opportunity to coordinate LEV policies with the Commission as part of implementation of the State Energy Master Plan, and we wish to honor this request. We believe that coordination by involved state agencies will best meet the state's need for LEV policies that improve air quality and reduce dependence on petroleum products, while ensuring that IOU ratepayers fund only programs that directly benefit them as ratepayers.

II. Background

A. History of IOU LEV Funding

In 1990, the Legislature adopted Section 740.3, which requires the Commission to work with the State Energy Conservation Commission, the State Air Resources Board, air quality management districts and air pollution control districts, the motor vehicle industry, and the IOUs to promote the development of equipment and infrastructure to facilitate the use of electric power and natural gas to fuel LEVs.[3] The statute prohibits the Commission from passing funding costs for such programs through to ratepayers unless the programs are in the ratepayers' interest.[4] In 1999, the Legislature amended Section 740.8, which defines "interests of ratepayers, short- or long-term" to mean "direct benefits that

[3] Stats 1990, Ch. 791, section 2

[4] Section 740.3(c)

are specific to ratepayers in the form of safer, more reliable, or less costly gas or electrical service."[5]

The Commission first approved IOU ratepayer funding for LEV programs under Section 740.3[6] in 1993 in Decision (D.) 93-07-054. Since D.93-07-054 predated the enactment of Section 740.8, we developed our own guidelines to determine whether ratepayers should pay for LEV programs. Those guidelines provided for ratepayer LEV funding "if the utilities can demonstrate that" the programs promote: 1) reliable and efficient utility service, 2) safe service, 3) environmentally and socially responsible utility service or 4) reasonable rates.[7] Thus, the IOUs bear the burden of proof in these proceedings.

We imposed four additional requirements in D.93-07-054: Compliance with statutory guidelines related to research and development and demand side

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[5] Stats. 1999, Ch. 1005, Section 41. (emphasis added)

[6] Section 740.3(a) states in pertinent part:

> The commission, in cooperation with the State Energy Conservation and Development Commission, the State Air Resources Board, air quality management districts and air pollution control districts, regulated electrical and gas corporations, and the motor vehicle industry, shall evaluate and implement policies to promote the development of equipment and infrastructure needed to facilitate the use of electric power and natural gas to fuel low-emission vehicles. Policies to be considered shall include both of the following:
>
> (1) The sale-for-resale and the rate-basing of low-emission vehicles and supporting equipment such as batteries for electric vehicles and compressor stations for natural gas fueled vehicles.
>
> (2) The development of a statewide standards for electric vehicle charger connections and compressed natural gas vehicle fueling connections, including installation procedures and technical assistance to installers.

[7] D.03-07-054, 1993 Cal. PUC LEXIS 574, at *21-29 and *32-33.

management; consultation with the rest of the industry; consistency with other agencies; and preservation and accommodation of competition.

First, we required that ratepayer-funded LEV programs comply with statutory and Commission guidelines related to Research, Development and Demonstration (R&D or RD&D) and Demand Side Management. Second, the IOUs had to demonstrate that they had reviewed programs of the motor vehicle industry, state, regional and local agencies, other utilities and state and national electric and natural gas LEV research groups to ensure their programs did not unnecessarily duplicate and were complementary with the programs of these entities. Third, we required the utilities to demonstrate that their programs are generally consistent with goals, policies and objectives of state and federal legislation and state and local agency action. Finally, utilities' programs could not unfairly compete with non-utility enterprises or interfere with the development of a competitive market.

We did not decide on funding for any particular LEV activities in D.93-07-054, but instead directed the IOUs to file 6-year program applications. In 1995, we issued D.95-11-035, our decision acting on those applications. We found that some of the IOUs' proposed programs satisfied the guidelines, but that others were not in the ratepayers' long-term interest. Among other things, we prohibited ratepayer funding to develop products for commercial use and to market LEVs. These limitations are highly relevant to our discussion below.

We also made clear in D.95-11-035 that ratepayer funding of LEV programs would not continue indefinitely:

> Where direct benefits to captive ratepayers are insufficient to support ratepayer funding of utility ventures, utilities are strongly encouraged to undertake new market activities of a broader scope, but should do so at shareholder expense. . . . This not only protects captive consumers from subsidizing new

> business ventures, it also allows utilities to reap the rewards of successes and swallow the penalties of economic losses.[8]

We reiterated this point in our 1998 decision denying rehearing of D.95-11-035: "[T]he Legislature and the Commission intended funding for these essentially experimental programs for a specific six-year period, not an open-ended one."[9]

We also stated in D.95-11-035 that the LEV statute does not obligate us to fund any IOU LEV programs. While the law "encourage[s] this Commission to approve utility programs that support the development of a market for [LEVs], no ratepayer funds can be expended unless the program will provide direct benefits to ratepayers in the form of safer, more reliable or less costly gas or electric service."[10] Thus, to the extent the IOUs cannot prove that their ratepayer-funded LEV programs provide such direct ratepayer benefits, the Commission must disallow the funding.

We also prohibited the utilities from undertaking ratepayer-funded research to develop new products.[11] We made clear that while utilities could engage in new product evaluation in order to adequately plan and manage the electric vehicle recharging load, ratepayers should not fund the development of new products. This restriction will become relevant when we discuss PG&E's and SoCalGas' use of ratepayer funding in partnership with the Idaho National

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[8] D.95-11-035, 1995 Cal. PUC LEXIS 978, at *15 (emphasis added).

[9] D.98-12-098, 1998 Cal. PUC LEXIS 918, at *3-4.

[10] D.95-11-035, 1995 Cal. PUC LEXIS 978, at *131.

[11] *Id*. at *32.

Engineering and Environmental Laboratory (INEEL), a laboratory operated for the United States Department of Energy (DOE) by Bechtel Corporation.

D.95-11-035 authorized funding for utility LEV programs for six years. The funding expired on December 21, 2001. We extended the funding through December 31, 2002 in Resolution G-3322, and through our interim decision on these applications in D.02-12-056. We explained in D.02-12-056 that, "We do not prejudge the utilities' applications for any additional funding or new program activities, or whether continued funding of existing LEV program activities pursuant to our final decision is appropriate."[12]

D.95-11-035 provided that the utilities would record their LEV program expenses in "one-way" balancing accounts. The accounts are so labeled because their usage requires the utilities to refund to ratepayers funds reflected in rates but left unspent, but does not allow them to recover from ratepayers any expenditures in excess of the authorized accounts.[13]

D.02-12-056 also made clear that we would be considering only "discretionary" LEV program activities, such as customer service, training, research and development and other "non-mandatory" LEV programs, in this proceeding.[14] These discretionary programs are not the subject of statutory clean air requirements, but rather are carried out by the IOUs at their own discretion. This decision acts only on the IOUs' discretionary funding requests.

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[12] D.02-12-056, *mimeo.*, at 7.

[13] D.95-11-035, 1995 Cal. PUC LEXIS 978, at *138.

[14] *See Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge,* June 26, 2002.

We explained that we would review "mandatory" LEV program activities in each utility's general rate case (GRC) or cost-of-service proceeding.[15] We identified as "mandatory" activities the acquisition of alternative fuel use fleet vehicles pursuant to federal law, operation and maintenance costs associated with use of alternative fuel use fleet vehicles and associated infrastructure, infrastructure (fueling facilities and related equipment) needed to support alternative fuel use fleet vehicles, employee training and instruction necessary for the use of alternative fuel use fleet vehicles, and accounting for the costs of these mandatory activities. These activities are therefore outside the scope of this decision. To the extent the IOUs have included requests for mandatory funding in their applications – even interim funding pending the outcome of their GRCs or cost-of-service proceedings – we do not act on them here.

B. Market and Regulatory Environment for LEVs

Although the current market for pure electric and natural gas vehicles (NGVs) is relatively small, the number of these vehicles in the state will most likely increase because of regulatory requirements and the development of new technology.

While nearly all pure electric vehicles (EVs) are in California,[16] there are now only 2,300 battery EVs on California's roads.[17] A report that SCE and PG&E submitted to the Commission states that "according to vehicle manufacturers,

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15 *Id.*

16 2 RT 230-31. References to the Reporter's Transcript are abbreviated as "RT." Thus, 2 RT 230-31 refers to Volume 2 of the Reporter's Transcript at pages 230-31.

17 Testimony of Analisa Bevan for California Air Resources Board (Commission Hearing Exhibit [Exh.] 1200), at 1.

expected California light-duty[18] EV [2002] sales are currently estimated at about 400 vehicles."[19] However, EV technology is also being used to fuel other types of vehicles and equipment, such as shuttles, airport bag tugs and belt loaders, forklifts, golf carts, sweepers, scrubbers, and varnishers, industrial tow tractors, burden and personnel carriers, turf trucks, and electrified truck stops.[20] Several hundred thousand of these applications of EV technology are presently being used in the state. There are currently no plug-in hybrid vehicles – vehicles with both an electric motor and an internal combustion engine that are capable of operating completely with the electric motor and a battery system charged from the electric grid – available on the market in the U.S.[21] Full-scale commercialization of fuel cell vehicles, which are fueled by hydrogen, is not anticipated until at least 2010 due to "significant engineering and technology challenges [that] lie ahead."[22]

On the natural gas side, the picture is slightly better. There are approximately 100,000 natural gas vehicles (NGVs) in the United States, 20% of which are in California. There are approximately 200 liquid natural gas (LNG) vehicles operating in California.[23]

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[18] Light-duty EVs include passenger cars and trucks.

[19] *Report on the Electric Vehicle Markets, Education, RD&D and the California Utilities' LEV Programs,* March 22, 2002 (Exh. 100), at 2-2.

[20] Id. at 2-7

[21] *Id.* at 2-4 – 2-5

[22] *Id.* at 2-5.

[23] 4 RT 523

However, most of the increases in LEV production (except the production of internal combustion engine/electric hybrid vehicles that do not require electric charging) have been driven by regulatory requirements. The federal Energy Policy Act (EPAct)[24] requires alternative fuel providers to use alternate fuel vehicles for at least 90 percent of their newly-acquired light duty vehicles for model year 2000. Since l990, California Air Resources Board (CARB) regulations have required that automakers produce a certain number of zero-emission vehicles (ZEVs) in order to improve air quality. Despite several delays in the implementation of this program in the 1990's, CARB entered into a memorandum of agreement with seven major auto manufacturers to produce approximately 2,000 LEVs between 1998 and 2000. Although CARB regulations that required production of an increased number of zero emission vehicles in 2003 and 2004 were on hold due to automaker lawsuits, CARB is presently amending its regulations in response to this litigation. The proposed regulations would promote the production of zero emission vehicles, including electric vehicles or hydrogen fuel cell vehicles, thereby increasing the number of LEVs in the state. CARB has also adopted regulations that require engine manufacturers to reduce diesel emissions and public transit fleets to retrofit or replace existing diesel vehicles, based on the cancer risks associated with the presence of diesel particulate in the air.[25] It is likely that these regulations will further increase the use of LEVs in fleets as a substitute for diesel buses and other vehicles. Regional air quality management districts also have their own, often changing, requirements.

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[24] Pub. L. 102-486, codified in 42 U.S.C.; *see also* 10 C.F.R. §§ 490.302 & 490.307.

[25] Bevan testimony, Exh. 1200 at page 5.

In addition, Assembly Bill (A.B. 2076)[26], signed by Governor Davis in 2000, required the CEC, in cooperation with CARB, to draft a plan to reduce the use of petroleum fuel in the state in order to increase California's financial security, maintain an adequate energy supply, and reduce dependence on foreign oil. LEVs will undoubtedly serve an important function in enabling Californians to reduce their use of petroleum fuels while also meeting these transportation needs.

Although the Commission must ensure that IOU LEV programs directly serve ratepayers, we must also consider the IOUs applications for LEV program funding in the context of the state's public policy in support of alternatively-fueled vehicles. The production and use of LEVs also affect utility operations by potentially increasing load on the IOUs' systems. Moreover, the trend toward development and promotion of hydrogen fuel cell vehicles will affect utility operations, because hydrogen is produced through the use of electricity or natural gas.[27] Therefore, the Commission and the IOUs have meaningful roles to play in response to the new developments in LEV technology and an increased number of LEVs on the roads.

C. The IOUs' Applications

In this decision, we act on each IOU application consistently, in order to promote a cohesive LEV policy.

We note that although PG&E has requested funding of approximately 5.026 million dollars (in 2002 dollars) for its proposed 2003-2005 LEV program,

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[26] A.B. 2076 was codified as Chapter 8.2 (commencing with Section 25720) to Division 15 of the Public Resources Code, regarding fuel resources.

[27] Testimony of Roland Hwang for Environmental Coalition, RT 430:21-28; 431:1-17.

SCE has requested only interim funding pending our decision on its General Rate Case (GRC), and So Cal Gas and SDG&E have requested only interim funding pending our decision in their next cost of service proceeding.[28]

1. SoCalGas/SDG&E's Applications

SoCalGas and SDG&E initially filed a joint application seeking $2,924,000 in total discretionary LEV funding. However, they have amended their funding request as follows:[29]

SoCalGas	
Item	**Requested Funding (annual)**
LEV Vehicle Safety and Infrastructure Training (for SoCal Gas employees as well as outside fleet operators and individuals)	$135,000.00
Customer Education: SoCal Gas Tariff Availability and Eligibility, and Interconnection Services	$196,000.00
NGV R&D	$935,000.00

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[28] SoCalGas and SDG&E have applied for funding for 2002 and 2003 and apparently anticipate a decision in their cost of service proceedings before this period expires.

[29] The proposed decision partially denied the funding requests for SCE, SoCal Gas and SDG&E on the grounds that these utilities did not "break out" their proposed safety-related expenditures (Proposed Decision, p. 36.). However, the PD stated that if these IOUs were to clarify their funding requests, their requests would be treated similarly to PG&E's request for funding of safety-related program components. SoCal Gas and SDG&E therefore clarified their funding requests for the safety and customer education components of their LEV programs in their opening comments on the PD. Since the PD granted only half of PG&E's funding request for safety-related functions, SoCal Gas and SDG&E halved their funding requests. However, since we grant the IOUs full funding requests for safety-related functions, the table above reflects the full funding request by SoCal Gas and SDG&E for these programs.

Subtotal SoCalGas	$1,266,000.00

SDG&E	
LEV Vehicle Safety and Infrastructure Training (for SDG&E employees as well as outside fleet operators and individuals)	$61,000
Tariff Availability and Eligibility; and Interconnection Services	$88,000
Subtotal SDG&E	$149,000.00
Total SoCalGas / SDG&E	$1,415,000.00

2. PG&E's Application

PG&E seeks $5,026,000 in total discretionary LEV funding. Using PG&E's chart, this amount breaks down as follows:

Program Activities	**Program Description**	**$ (Million)**
Customer Education		**$2.635**
I. LEV Vehicle Safety and Infrastructure Training	Fueling, Vehicle, and Infrastructure Safety training for PG&E employees as well as outside fleet operators and individuals	$0.496
II. LEV Technology and Infrastructure Introduction; Regulatory Requirements and Funding Availability Education; Emissions Benefits; and Industry Participation	Matching technology with PG&E fleet requirements; participating on LEV industry boards to ensure coordination and non-duplication of efforts; sharing "learnings" with customers	$1.799
III. PG&E Tariff Availability and Eligibility; and Interconnection Services	Answer customer inquiries regarding applicable LEV-related gas and electric tariffs, including use of off-peak electric rates to minimize peak	$0.340
RD&D		**$1.348**
IV. Small Scale Natural Gas Liquefier Demonstration	Demonstrate INEEL technology to test its ability to safely deliver low-cost liquefied natural gas to PG&E fleet to reduce fleet operation costs. LNG may also be provided, under an experimental rate, to	$0.624

	other customers; also, evaluate use of LNG to help reduce gas distribution system costs and avoid	
V. Small Specialty EV Charging Architecture Development	Support development of common, global charging systems for on-road and off-road EVs	$0.184
VI. Fuel Cell Vehicle Station Demonstration	Provide support for a natural gas-to-hydrogen reformer demonstration by the CA Fuel Cell Partnership to ensure safety and understand utility-specific system impacts and load management implications for the future	$0.540
Technology Application Assessment		$1.043
VII. Distribution System Load Impact Assessments	Evaluate EV and NGV load additions to minimize costs to distribution system	$0.550
VIII. Safety Codes and Standards Support	Minimize utility compliance costs and protect utility and customer interests as EV and NGV codes and standards are developed	$0.089
IX. LEV Performance Assessments	Determine actual field performance of LEV technology in PG&E fleet applications to ensure safety and to lower fleet costs; share "learnings" with customers	$0.299
X. Participate in Others' LEV Demonstrations	Gather LEV-related performance knowledge through project cost-sharing, to reduce PG&E fleet	$0.105
TOTAL		**$5.026**

3. SCE's Application

According to its chart, SCE seeks only $182,160 in discretionary funding.

Activities Related To:	Utility Role	Alleged Ratepayer Benefit	Budget
Emergency response to EVs	SCE primary source of EV safety information concerning issues related to utility operations.	Safety awareness and emergency preparedness.	$ 27,342
Information	Source for	Customer	$ 45,540

Network.	information on utility EV programs including time-of-use rates, etc.	information source for EV load management information, safety hook-ups, etc.	
EV Loan program	Collects EV use profile data and assists in designing load management.	Load management, time-of-use, etc.	$ 36,432
Customer Outreach	Disseminate information to customers and public about EV fleets, rates, load management, etc.	Customer information sources for utility EV load management, safety, energy efficiency, etc.	$ 72,864
TOTAL			$182,160

D. Other Parties' Responses to the Applications

The Commission's Office of Ratepayer Advocates (ORA) protested the IOUs' applications, asking that the Commission discontinue ratepayer funding of LEV activities that are not directly related to utility obligations under various government mandates to purchase, operate and maintain LEVs. Specifically, ORA requests that we discontinue funding for LEV RD&D activities, which it alleges should be covered by existing RD&D funding derived from charges for Public Purpose Programs. It also asks us to discontinue funding for consumer information, education and training activities relating to commercially available LEV products and services.[30]

The Southern California Generation Coalition (SCGC), consisting of the Los Angeles Department of Water and Power, the City of Burbank, the City of Glendale, the City of Pasadena, the Imperial Irrigation District, Williams Energy

[30] However, ORA did not participate in the hearing or file testimony or briefs because of resource constraints.

and Reliant Energy, protested the application of SoCalGas and SDG&E. SCGC recommends that the SoCalGas customer service function be limited to providing safe service to entities that directly fuel NGVs. It also alleges that government agencies or other organizations should provide NGV information to the public, rather than the utility. For NGV RD&D, it claims that ratepayers should not fund these activities because LEV product manufacturers are better suited to do so. Finally, it asserts that utility RD&D activities should be funded through the Natural Gas Public Purpose Program surcharge.

The Western States Petroleum Association (WSPA), a non-profit trade organization representing companies involved in the petroleum industry, protested the application of SoCalGas and SDG&E. WSPA is concerned that the proposed LEV programs exceed the parameters adopted in D.95-11-035 and that additional clarification is needed to fully understand the utilities' customer education and RD&D activities.

Liberty Fuels (Liberty), an equipment developer, opposes the utilities' applications. Liberty claims that the utilities have used ratepayer funds to monopolize the NGV market and that continued funding will provide the utilities with an unfair advantage over the private sector. In support of its allegations, Liberty says that past spending has been inappropriately devoted to lobbying and promotional efforts that are contrary to D. 95-11-035. Additionally, Liberty claims, utility RD&D efforts have been directed toward developing new products that should be undertaken by private companies. As a case in point, Liberty suggests that natural gas compressor manufacturers are better suited to conduct RD&D for such products than the utilities.

The California Energy Commission (CEC), a state agency with an interest in the conservation and/or displacement of petroleum fuels and promotion of fuel diversity, supports the utilities' continued role in expanding the use alternative fuels. Its primary interest is to define the scope and scale of the utilities' LEV programs. In particular, CEC maintains that ratepayer funded RD&D is appropriate to support compliance with the EPAct, although public-private partnerships should be explored.

The California Air Resources Board (CARB), a state agency authorized to adopt regulations intended to meet clean air standards, supports the utilities' applications. CARB claims that the utilities' LEV programs support the agency's efforts to reduce transportation-related emissions. CARB also states the utilities have provided valuable input into developing guidelines for LEV incentives and promoting the availability of grants. According to CARB, utility training and education activities based on their fleet experience is important in fostering the public's acceptance of zero emission vehicles. Additionally, the utilities' continued participation in CARB's Infrastructure Working Group is important for developing infrastructure standards.

The South Coast Air Quality Management District (SCAQMD), a public agency with air quality regulatory authority over the South Coast Air Basin, supports the utilities' applications. It claims that the proposed utility LEV programs, including public information and RD&D components, are vitally necessary to assist the agency with its expedited implementation of its air quality management plan. SCAQMD also says that utility public information programs help users understand a myriad of governmental certification categories and equipment options. Furthermore, issues related to fuel specifications concerning the agency benefit from utility involvement. Utility participation in SCAQMD's Technology Advancement Office promotes non-duplicative LEV RD&D efforts and certain other enhancements.

CALSTART, an organization that works with industry and government to develop advanced transportation technologies to improve air quality, supports the utilities' applications. CALSTART claims that ratepayer funding is needed for LEV RD&D because manufacturers are unwilling to make investments in this area and there are government spending shortfalls. The group also cites a need for utility involvement in the development of natural gas hybrid electric vehicles.

The Environmental Coalition (Environmental Coalition or Coalition), consisting of the National Resources Defense Council, the Coalition for Clean Air, the Planning and Conservation League, and the American Lung Association of California, supports the utilities' applications. The Coalition disputes the characterization that some elements of the utilities' programs are "discretionary" and claims that all aspects of the IOUs' programs are necessary. According to the Coalition, utility LEV programs benefit ratepayers by playing a key role in improving air quality, sharing LEV related information with customers and promoting safety. In its view, unless these programs are extended, the ratepayers' investment in the utilities' past activities and experience with LEVs would be lost.

E. IOUs' Current Staffs and Fueling Stations

As best we can discern, the IOUs currently have the following staffs handling LEV activities:

- SoCalGas/SDG&E have downsized their staff from 39 to 7 employees.
- PG&E has approximately 10 full time equivalent staff persons (FTEs) performing the customer service function, 3 FTEs in the RD&D area, and 2-1/2 FTEs in the Technology Application Assessment group.
- SCE did not provide relevant information.

The IOUs have the following fueling stations for LEVs:

- SoCalGas has 20 or 21 NGV fueling stations. Fourteen are open to the public. SDG&E has 3 fueling stations.
- PG&E has 22 NGV fueling stations.
- SCE has no NGV fueling stations since it is an electricity-only utility.

III. Discussion

A. Introduction

It is axiomatic that improved air quality is a societal benefit. We support the goal, but the question before us is not whether we should endorse better air quality, but whether utility ratepayers should bear the cost of those LEV programs. We stated in D.95-11-035 that "we cannot approve . . . utility programs solely because they may help improve air quality. . . ." The IOUs bear the burden of proving that their programs directly benefit ratepayers and meet the criteria we have adopted in prior decisions.

Several parties have argued that IOU LEV programs should be funded by public purpose surcharges, rather than through ratepayer funded LEV programs. For example, SCGC urges us to change the funding source for natural gas LEV programs from the dedicated funds collected from ratepayers and placed in a one-way balancing account to the Natural Gas Surcharge, a public goods charge embodied in Section 890.[31] ORA also supports funding of IOU RD&D related to LEVs from existing RD&D funding derived from charges for public purpose programs.

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[31] Section 890, enacted in 2000, provides, in relevant part, for a ratepayer surcharge to fund "cost-effective energy efficiency and conservation activities and public interest research and development authorized by Section 740 not adequately provided by the competitive and regulated markets."

IOU LEV programs that generally benefit the environment or society, but do not directly benefit ratepayers as ratepayers, could possibly qualify for funding through public purpose surcharges. However, to determine the proper use of public purpose surcharges and the scope of programs to be funded from this source, the Commission must review a broad range of IOU social and environmental programs. The record before us here is limited to LEV programs. Therefore, if the IOUs wish to pursue funding of LEV program components that promote general environmental or social goals but may not meet the requirements of Section 740.8, they should raise the issue in other proceedings specifically related to public purpose surcharges.

In addition, we do not believe that the test for continued funding of the IOUs' discretionary programs should depend on whether the market is mature and self-sustaining. Section 740.2, which required the Commission to encourage research, development, and demonstration activities by the IOUs to further the legislative goal of achieving substantial market penetration by electric and compressed natural gas fueled vehicles, expired by its own terms on January 1, 1997.[32] Nor is it clear that the market for LEVs will ever be fully self-sustaining, especially among individual vehicle owners. However, under Section 740.3, the

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[32] Section 740.2 stated in pertinent part:

> 740.2 Electric and compressed natural gas fueled vehicles; Legislative goal
>
> (a) The Commission shall encourage gas and electric corporations to pursue research, development, and demonstration activities <u>in furtherance of the legislative goal of achieving substantial market penetration of electric and compressed natural gas fueled vehicles.</u> For the purposes of this division, "electric vehicle" means a vehicle powered solely by batteries and a vehicle which has an onboard means of generating electricity. (<u>Emphasis added</u>).

Commission has a continuing obligation to work with other governmental agencies, the IOUs, and the auto industry to promote the development of equipment and infrastructure needed to facilitate the use of electric power and natural gas to fuel LEVs.

B. IOU Safety Programs

As part of their LEV programs, the IOUs conduct safety education and training to ensure the safe usage and fueling of LEVs.

Persons driving NGVs must fuel their vehicles at compressed natural gas (CNG) stations. Stations are generally located on IOU or other private property. Although the safety of natural gas as a fuel has substantially improved, safety remains an issue with compressed fuels.[33]

In many instances, stations are located on IOU property. Some of these stations are open to the public, as well as to the IOU to fuel its own fleet. Since most CNG stations are not staffed, the State Fire Marshal requires all station users to be trained in safe fueling techniques.[34] The IOUs provide one-on-one training by meeting in person with individual and fleet customers,[35] and have also developed videos and written materials which explain safe fueling techniques. SDG&E and SoCal Gas have also developed "train the trainer" programs for large fleet customers in order to efficiently utilize training resources.

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[33] RT 204:15-18

[34] Exh. 200, at 2-12, Table 2-2

[35] Eaves test at 34, 42; Exh. 200 at 2-23

The number of CNG stations in the state will most likely increase in the coming years because of regulatory requirements that promote usage of LEVs.[36] At least in the case of SoCal Gas and SDG&E, the new stations will probably be located on IOU property.[37] Although station manufacturers, rather than the IOUs, could train members of the public who use the stations, in some cases stations have been unable to open because manufacturers did not provide the required training.

The IOUs also train customers in the safe recharging of electric vehicles.[38]

In addition to customer training, the IOUs are the primary source of information on EV safety-related operations and a proper emergency response when utility and emergency personnel must respond to an incident involving an EV.[39]

The IOUs also perform other safety-related functions, including:

- Providing technical support on the siting, design, installation, and operation of maintenance facilities and public EV charging facilities so that these facilities may safely operate;[40]
- Working with the State Fire Marshal's Association, local governments and law enforcement agencies to develop and update procedures for response to accidents involving LEVs and charger-related incidents;[41]

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[36] Exh. 200 at 2-23, Eaves testimony at 34.

[37] Eaves test. at 34

[38] For example, see Edison report on Electric Vehicle Market, p. 6-1

[39] Id.

[40] Id.

[41] Edison amended testimony, page 9

- Working with the State Fire Marshal, governmental agencies and the auto industry to develop and publish codes and standards for safe EV charging and installations;[42]
- Participating in the training of city planners, building inspectors and building contractors on codes and standards for safe EV operations;[43]
- Participating in the development of codes and standards for fueling systems, nozzles, hoses and other equipment to avoid accidents and promote efficient fueling of LEVs;[44]
- Participating in the development of codes and standards for safe on-site storage of natural gas at fueling stations.[45]

We believe that the IOU's customer training and other safety-related activities described above directly benefit ratepayers by ensuring safe and cost-effective utility service. These activities reduce the risk that customers will experience an accident or encounter other safety hazards when operating, fueling or recharging LEVs and increase the likelihood that emergency personnel will have sufficient knowledge and training to respond appropriately to incidents involving LEVs. Since many CNG stations are located on IOU property and the IOUs are direct providers of the electricity used to recharge EVs, if customer training were not available, an accident caused by a customer's improper fueling of a NGV or recharging of an EV could also expose the IOU to significant liability, at ratepayer expense. It is important for the IOUs to continue these

[42] SCE amended test., page 6-4

[43] Id.

[44] Eaves test, p. 17

[45] Id.

activities, particularly as the number of LEVs on the road increases and LEV technology evolves and changes over time.

We believe that the amounts requested by the IOUs for these activities are reasonable and approve the funding requests of the IOUs for safety-related LEV program expenditures.

C. Other Education and Training Programs (Non-Safety)

The IOUs also offer customer education and training related to issues other than safety as part of their LEV programs. For example, PG&E and SDG&E / SoCal Gas offer education and training in the following areas:

- Regulatory Requirements: Training and workshops for fleet operators to become familiar with existing and expected regulatory requirements including CARB fleet rules, current and proposed air district rules, eligibility requirements for HOV lane access for EVs and certain qualifying NGVs; fueling station standards; fuel specifications, and parking and maintenance facility codes and regulations. SDG&E / SoCal Gas also offers information regarding state and federal tax credits for LEVs.

- Available Products: Information regarding LEV vehicle / chassis availability; engine performance levels and options; differential price of vehicles; fuel capacity; costs of equipment options; location, size and capacity of fuel tanks; requests for information regarding bi-fuel versus dedicated fuel vehicles; viability of conversions; LEV products in development or testing; timing for release of new products. PG&E also offers information regarding the availability of used vehicles and equipment.

- Infrastructure: Information related to EV charging and NGV compressor stations, including but not limited to NGV station design, permits, construction, and evaluation, fueling options ("time" versus "fastfill"), NGV station site-specific concerns (fleet size, fueling window, system costs, costs of operations, permits, public access, maintenance facility upgrades, safety systems, weights and measures issues, fuel specifications, fuel card access); fuel storage requirements; fuel network compatibility, inductive versus conductive charging and codes and standards. SDG&E also offers information on the production of CNG, the difference between CNG and LNG, fueling providers, customer applications for fuel cards, billing, how to use public access stations, and emergency shutdown requirements.

- Economics: Information related to electric and natural gas pricing; on-peak versus off-peak rates and advantages to charging vehicles during off-peak periods; station ownership versus third-party turn-key operations; cost of operation of LEVs; fuel cost comparisons, and pricing options. SDG&E also provides information on the economics of owning a station, fuel tax exemptions, taxes applied to CNG and LNG fuel, and the applicability of utility users tax.

- Emissions Performance: Information regarding EV and NGV emissions performance including emission test results of specific products; in-use performance, diesel and gasoline emissions, emissions trading. PG&E also offers information regarding grant-specific economic competitiveness calculations; health impacts related to vehicle exhaust; global warming impacts; exhaust toxicity and after treatment advances.

- Funding: Information regarding specific funding sources to offset the incremental costs of EVs and NGVs and to support the construction of infrastructure (e.g., incentives, grants, matching funds, tax deductions/credits, etc.); mechanics training and facility upgrades.

- Industry support: PG&E also participates in the Department of Energy's (DOE) Clean Cities Coalitions as coordinators or key members. This role includes preparation of newsletters, organizing meetings, coordination activities, and responding to inquiries; gathering and responding to DOE requests for information and preparing and compiling surveys and reports. PG&E claims that these activities foster additional growth in LEVs and enable DOE to assess the volume of LEVs in the marketplace.[46]

[46] Exh. 200, Table 2-3, at p. 2-20, 2-21.

> The IOUs also maintain contact with government agencies, vehicle and engine manufacturers and organizations and coalitions concerned with LEVs.

Edison's customer education and training programs generally consist of:

- Education of customers, including fleet manager and other stakeholders on the safety, reliability, and costs of EV use;
- Operating a LEV loaner program, in which fleet operators and others interested in purchasing LEVs may borrow an Edison fleet vehicle;
- Educating utility employees to use and maintain EV and associated infrastructure;
- Supporting community college vehicle technology courses by providing demonstration vehicles and seminars.

Each of the IOUs provides training and education through customer "hotlines" and websites regarding LEV issues; displays and videos; participating in conferences, workshops; school, service club and Earth Day Events, primarily in response to customer requests; participating in professional associations; and training fleet managers.

For example, PG&E maintains a Clean Air Transportation Hotline (CAT Hotline) and a website for customers interested in LEV-related information. Customers most often seek information regarding PG&E's EV and NGV rate schedules, station locations and access directions, lists of products and service providers, and safe fueling instructions.[47] SoCal Gas and SDG&E support the printing of a directory of NGV fueling stations; participate as speakers at various workshops and forums on LEV issues; and host workshops at which customers

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[47] Id.

and LEV manufacturers can meet and discuss LEV questions and issues. Edison also offers charging displays and videos to teach efficient load management and provides rate incentive brochures and a monthly newsletter to over 4,000 subscribers with current LEV information from multiple stakeholders in the auto industry, government, and the private sector.

We believe that some of the IOU programs relate to the provision of reliable, safe, and less costly utility service and directly benefit ratepayers. We therefore approve the following education and training activities:

- Providing information related to electric and natural gas pricing and applicable rates, such as off-peak and on-peak rates for charging EVs, and fuel cost comparisons and tax credits for LEVs, as related to the overall cost of operating LEVs;

- Communications with and the education of regulators and the LEV industry regarding the impact of existing and proposed LEV regulations on the utility system;

- Providing information regarding the fueling of existing and new LEV technology, including the location of fuel tanks, the location of CNG stations, etc.;

- Training and education regarding the design and operation of EV charging and NGV stations as necessary to ensure safe and efficient operations;[48]

- Training of mechanics in safe and efficient fueling or recharging of LEVs and applicable codes and standards;

- Industry support and maintaining contacts with governmental agencies, the auto industry, and other groups and coalitions concerned with LEVs in order to keep abreast of issues and

48 The IOUs are well qualified to provide this information as the providers of electricity and CNG used to fuel LEVs.

developments in LEV technology that affect the IOUs ability to provide safe, reliable, and less costly utility service and to safely and efficiently operate its own fleet.

The IOUs may determine the most efficient manner of providing these services, whether through direct contacts with customers, websites, hotlines, or other methods.

However, we find that certain other education and training programs may have general environmental or social benefits but do not directly benefit ratepayers as ratepayers. These programs include:

- SCE's vehicle loaner program[49]
- Information on available LEV models, proposed new LEV technology, and used LEVs, except as related to fueling or charging;[50]
- Information related to auto emissions;

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[49] Under this program, SCE lends LEVs from its own fleet to fleet or individual customers who are considering the purchase of a LEV for two to four weeks so that they may try out the technology for a 2 to 4 week period. While this program may assist the particular customers who borrow LEVs from SCE's fleet, it does not result in more reliable, safer, or less costly utility service for ratepayers in general. Although SCE states that this program provides valuable information regarding EV energy use, SCE could obtain the same information from the operations of its own fleet. Further, although SCE claims that this program enables SCE to find out which customers in its territory may purchase LEVs and to identify issues related to customer service, the relationship of the vehicle loaner program to SCE's provision of reliable, safe and less costly electric service is unclear at best.

[50] D.95-11-035 specifically disallowed the use of LEV funds to provide information on the availability of used LEVs: "The sale of used natural gas vehicles (NGVs) should be developed by the market without ratepayer funding."

- Sources of funding available for the purchase of LEVs or the construction of stations, such as grants and vehicle incentive funding.

- Education and training of fleet and individual customers regarding LEV regulatory requirements, except as related to safe and efficient fueling or recharging of LEVs.[51]

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[51] We note that there are consultants in the marketplace who can provide fleet and other LEV customers with information on LEV regulatory requirements, available products, etc., for a fee (Jt. Amended Application of SoCalGas and SDG&E at 4), and CARB already conducts a public education and training program regarding LEVs. (Testimony of CARB's Analisa Bevan (Exhibit 1200 at 4). However, Analisa Bevan of CARB testified that CARB's public education and training program is operated on a "shoe-string budget", and CARB does not have the staff or resources to take over all of the customer education and training currently provided by the IOUs. (RT 257:10-18, 260:8-12). CARB therefore relies on partnerships with other entities as much as possible to carry out its LEV educational programs. (RT:257:16-18). CARB's program also does not address heavy-duty LEVs or the implementation of fleet requirements. (RT 258:5-7, 259:14-15.) Susan Brown of CEC also testified that the CEC is not currently staffed or funded to assume customer education and training activities provided to date by the IOUs, and that she does not anticipate increased funding for this purpose because of the state's fiscal situation. (RT 302).

At present, the IOUs' customer education and training programs are primarily utilized by fleet customers. (1 RT 125 Stone/PG&E). Many fleet customers are public agencies, such as school bus operators, transit districts and the U.S. Navy, as well as shuttle-ride operators, utilities, and taxicab companies acting in response to statutory or air quality management district regulatory requirements. (See, e.g., Testimony of John Boesel on behalf of Cal START, Inc. (Exh. 800), at 2-3). In addition, the state's public policy, as evidenced by the passage of A.B. 2076, and CARB's proposed ZEV regulations, is to increase the use of LEVs, including among individual motorists. Individual motorists who wish to explore the possibility of purchasing a LEV may not be able to afford consultants, and public agencies subject to fleet requirements are funded by ratepayers' tax dollars. Moreover, public agencies and businesses subject to fleet requirements are often utility customers. We believe it is important to develop a cohesive policy regarding the role of government, the auto industry, and the IOUs (if any) in educating and supporting fleet and individual customers in their transition to the use of LEVs. We therefore direct the Strategic Planning Division further consider this issue as part of its report on LEV programs ordered in this decision.

Footnote continued on next page

However, the IOUs applications do not describe customer education and training programs with sufficient specificity or sufficiently break down individual program components and costs as necessary for us to determine the amount of funding to be approved. We therefore direct the IOUs to submit advice letters to the Commission Energy Division within 60 days of the effective date of this decision to clarify the specific components of customer education and training programs and to break down the costs by individual items. The Energy Division shall review and act on the advice letters based on our policy direction in this order and the requirements of Sections 740.3 and 740.8.

D. Research and Development

PG&E and SoCal Gas have also requested funding for RD&D related to LEVs.[52] We address funding of RD&D programs as follows:

1. INEEL Project

PG&E is conducting a small-scale natural gas liquefier demonstration in Sacramento in a joint collaboration with Southern California Gas Company and the CEC, in coordination with the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL).[53] This technology takes advantage of the pressure reduction that already occurs at natural gas to distribution pressure regulation stations to facilitate liquefaction of natural gas.[54] PG&E claims that IOU involvement in this project is essential because the

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52 SDG&E and SCE have not requested funding for LEV-related RD&D. We act upon these funding requests as follows:

53 Exh. 200 at 2-38

54 Id.

technology is pipe-line based and could affect the composition of natural gas downstream in the distribution line.[55] So Cal Gas believes that this technology provides a cost-effective fuel for NGVs, e.g., LNG, in areas in which pipeline gas cannot be used to fuel NGVs.

PG&E requests $624,000 to support this project and has already spent between $1.6 and $2.1 million on this project to date. SoCalGas has spent $1 million on the project, although it plans to expend no additional funds until "the demonstration unit is up and operational."[56]

However, here, the IOUs have spent ratepayer R&D funds on products intended for commercial use, in contravention of D.95-11-035. We therefore deny this funding request. The evidence demonstrates that the INEEL project is aimed at developing a liquefied natural gas product for commercial use. SoCalGas' witness stated that "the liquefier . . . is a technology that will hopefully . . . come to the market . . . "[57] PG&E prepared a draft business plan for commercial development of the natural gas liquefier.[58] PG&E intended the product for commercial development. According to PG&E's witness, "We think ultimately some product developer, commercialization partner that INEEL will choose will bring a product to market complete with all of the bells and whistles that products have to have to be successful in the market."[59]

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[55] Id.

[56] I RT 88-89

[57] 1 RT 97

[58] 2 RT 170-71. The PG&E employee who developed the draft business plan had never done so before for any other product, so such plans were not routine. 4 RT 518.

[59] 2 RT 169

Furthermore, PG&E has an agreement with INEEL providing for revenues from commercialization of the liquefier to accrue to ratepayers.[60] PG&E picked the INEEL technology and rejected others because, among other things, none of the latter "offered substantial evidence that they had a clear path to commercialization."[61] PG&E also "sp[oke] to the commercialization potential of the technology in its response to the [California Energy Commission's] request for proposals to join the INEEL project."[62]

While the IOUs claim their role in the liquefier project was not for purposes of commercialization, even one of the supporters of their programs disagreed, characterizing IOU programs "as an essential component of the process of innovation inherent in the commercialization of alternative fuel technology."

While this sort of project may be worthwhile, it runs counter to D.95-11-035's prohibition on activities designed to lead directly to the development of new commercial products. As we stated in that decision, "Their development should be supported by the firms that could profit from their commercialization."[63] Here, the evidence supports the conclusion that the project runs afoul of the foregoing prohibition.

In addition, "the use of regulated monopoly funds for the development of a private business in this emerging market raises the potential for unfair

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[60] 4 RT 464-65

[61] 4 RT 466

[62] 4 RT 471

[63] D.95-11-035, 1995 Cal. PUC LEXIS 978, at *126.

competition."[64] For example, in D.95-11-035, we ordered the utilities to divest themselves of any fuel stations not built on their own land to support their own fleets, due in large part to concerns that such stations would compete unfairly with third parties "interested in competing in the market for the construction and operation of refueling stations at customer or other private sites."[65] The liquefier competes with other products in the market,[66] giving us concern that ratepayer funds could be unfairly subsidizing a competitive product.

Past spending in this area is inappropriate for the same reasons.[67] PG&E also did not apply to the Commission to fund the INEEL project with LEV funds.[68] Rather, it shifted funds allocated to other RD&D to this project, relying on D.95-11-035's provision allowing fund shifting for approved programs.[69] The IOUs shall make the balancing accounts whole with shareholder funds.

2. California Fuel Cell Partnership

PG&E has been an associate member of the California Fuel Cell Partnership, which includes the U. S. Department of Energy, the U. S. Environmental Protection Association, the U. S. Department of the Interior, state agencies, air quality management districts and all major automakers, since 2000.[70]

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[64] *Id.* at *140-41

[65] *Id.* at *124-25

[66] 2 RT 171

[67] 4 RT 432-64

[68] 4 RT 470

[69] *Id.*

[70] Exh. 200 at 2-41

The Fuel Cell Partnership is installing hydrogen fuel stations for fuel cell vehicles in Northern California , and some members are targeting local fleets for fuel cell vehicle demonstrations.[71] The manufacturers of prototype fuel cell vehicles have asked certain IOUs to provide fuel for demonstration vehicles, and may engage in high altitude or performance reliability testing of these vehicles.[72] PG&E has been also been asked to provide a host site for the prototype hydrogen fuel cell vehicle. [73]

According to PG&E's testimony, demonstrations of fuel cell vehicles at the site will enable PG&E to assess the impacts of the vehicles on its utility system, including its pipelines.[74] Fuel cell vehicles powered by hydrogen may affect distribution loads and capital costs because of the potential need for large-scale use of electrolysis or natural gas to generate hydrogen.[75] The use of hydrogen for fuel cell vehicles also involves safety risks that could affect PG&E pipelines and disrupt operations in the event of an accident.[76] PG&E also plans to pursue RD&D related to electrolysis-based hydrogen fueling as part of this project.[77]

We believe that PG&E's participation in this project directly benefits ratepayers, because the project will help PG&E to evaluate the impacts of fuel

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[71] *Id.*

[72] *Id.*

[73] RT 533:16-18

[74] RT 534:5-12

[75] RT:534:21-28, 535:1-14

[76] RT 536:6-13

[77] Exh. 200 at 2-42

cell vehicles on its ability to provide reliable, safe, and less costly utility service. PG&E's participation in this project is particularly important at this time, because fuel cell vehicles are an emerging trend in LEV technology.

We therefore approve PG&E's requested expenditures for participation in the Fuel Cell Project in the amount of $540,000.

3. Development of Small-Scale EV Charging Architecture (PG&E)

This project involves PG&E's participation in an effort with other industry stakeholders to develop a common charging system for different types of EVs, specifically electrically propelled products such as lift/boom vehicles, order pickers, lift trucks, floor maintenance, yard/garden and other small electric vehicles. (Exh. 200 at 2-39, 2-40). PG&E will provide distribution system interconnection and load management services, as well as electric vehicle tariff expertise. Id. "Although this program appears to meet the criteria stated in Section 740.8, PG&E's testimony lacks sufficient detail for us to approve the program here. In order to obtain funding for this program, PG&E shall file an advice letter, which contains a more specific description of this activity and the manner in which it relates to the provision of safe, reliable or less costly utility service. The Energy Division may approve the funding if there is a sufficient link between the program and the criteria stated in Section 740.8.

4. SoCalGas RD&D Programs

Although these programs appear to directly benefit ratepayers, So Cal Gas has requested funding for the INEEL project as a partner with PG&E, the CEC, and the Department of Energy. So Cal Gas also seeks funding for other RD&D related to improving the cost-effectiveness, durability, reliability and performance of natural gas infrastructure, which addresses issues such as:

- Safety codes and standards

- Developing more cost-effective compressor systems to provide 3,600 psi gas into medium- and heavy-duty vehicles
- Developing card access systems and billing systems for unattended public access stations that can accommodate credit cards
- Improvement of the accuracy of high pressure dispenser systems
- Defining solutions for areas in which pipeline quality gas does not meet CARB commercial fuel specifications
- Developing natural gas fueled crew trucks in response to SCAQMD utility fleet rules
- Fuel Composition Testing on Heavy-Duty and Light-Duty Vehicles
- Development of Wide Range Fuel Controller for Heavy-duty Engines.

E. Programs that Enhance System Reliability

The IOU programs directed at ensuring "reliable" service focus on assessment of the load impacts of various types of LEVs, such as electric, natural gas, and fuel cell vehicles. We believe that it is the role and the responsibility of the IOUs to conduct load impact studies and assess the impact of LEV technologies on service efficiency, reliability, and cost-effectiveness. LEV programs designed to study load impacts directly benefit ratepayers and fulfill the requirements of Section 740.8.

However, the IOUs' applications do not contain sufficiently specific information about these programs for us to approve them here.

The IOUs may obtain funding of LEV programs aimed at enhancing utility system reliability by filing an advice letter with the Energy Division which more specifically describes each program and explains the relationship between the program and the criteria stated in Section 740.8 within 60 days of the effective date of this decision. The Energy Division shall approve the advice letter if the IOU makes a sufficient showing that the program directly serves ratepayers and the criteria stated in Section 740.8.

F. Other Issues

1. Utility Proposals to Incorporate LEV Programs into Other Proceedings

The IOUs generally favor abolishing separate review of LEV programs in proceedings such as this one, and support moving up-front review of funding to their respective GRCs or cost-of-service proceedings. While we have moved the mandatory aspects of their LEV programs to the GRCs, we do not believe that we should consider the discretionary LEV programs in that forum.

In view of lack of specificity of the IOUs applications and the need for careful review to ensure that discretionary LEV program expenditures directly benefit ratepayers, we decline to move LEV discretionary funding into the IOUs' GRCs or cost of service proceedings at this time.

2. One-Way Balancing Accounts for LEV Program Funds

In their applications, the IOUs asked for a relaxation of the current one-way balancing account treatment for LEV programs. That request is denied, and the IOUs are directed to maintain current accounting practices for all LEV programs.

G. Allowed Funding

In summary, we allow each IOU the following discretionary LEV funding for the period of one year from the effective date of this decision.

SoCalGas			
Item	**Requested Funding (annual)**	**Allowed/ Disallowed**	**If Disallowed, Reason**

Customer information, education and safety training	$196,000	Allowed in part, subject to advice letter approval	
NGV R&D	$935,000	Allowed, subject to advice letter approval	
SDG&E			
NGV customer information program	$450,000	Allowed in part, subject to advice letter approval	
EV customer information program	$439,000	Allowed in part, subject to advice letter approval	

PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
Customer Education		**$2.635**		
I. LEV Vehicle Safety and Infrastructure Training	Fueling, Vehicle, and Infrastructure Safety training for PG&E employees as well as outside fleet operators and individuals	$0.496	Allowed	
II. LEV Technology and Infrastructure Introduction; Regulatory Requirements and Funding Availability Education; Emissions Benefits; and Industry Participation	Matching technology with PG&E fleet requirements; participating on LEV industry boards to ensure coordination and non-duplication of efforts; sharing ”learnings” with customers	$1.799	Allowed in part, subject to advice letter approval	

PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
III. PG&E Tariff Availability and Eligibility; and Inter-connection Services	Answer customer inquiries regarding applicable LEV-related gas and electric tariffs, including use of off-peak electric rates to minimize peak	$0.340	Allowed	
RD&D		**$1.348**		
IV. Small Scale Natural Gas Liquefier Demonstration		$0.624	Disallowed	Commercial product
V. Small Specialty EV Charging Architecture Development	Support development of common, global charging systems for on-road and off-road EVs	$0.184	Allowed in part, subject to advice letter approval	
VI. Fuel Cell Vehicle Station Demonstration	Provide support for a natural gas-to-hydrogen reformer demonstration by the CA fuel cell partnership to ensure safety and understand utility-specific system impacts and load management implications for the future	$0.540	Allowed	
Technology Application Assessment		**$1.043**		

PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
VII. Distribution System Load Impact Assessments	Evaluate EV and NGV load additions to minimize costs to distribution system	$0.550	Allowed in part, subject to advice letter approval	
VIII. Safety Codes and Standards Support	Minimize utility compliance costs and protect utility and customer interests as EV and NGV codes and standards are developed	$0.089	Allowed	
IX. LEV Performance Assessments	Determine actual field performance of LEV technology in PG&E fleet applications to ensure safety and to lower fleet costs; share "learnings" with customers	$0.299	Disallowed	Determining performance of PG&E's fleet relates to a "mandatory LEV program" that should be reviewed in GRC. Sharing information with customers not related to safe, reliable or less costly utility service
X. Participate in Others' LEV Demonstrations	Gather LEV related performance knowledge through project cost-sharing, to reduce PG&E fleet	$0.105	Allowed	

SCE

Activities Related To:	**Utility Role**	**Ratepayer Benefit**	**Budget**	**Allowed/ Disallowed**	**If Disallowed, Reason**
Emergency response to EVs	SCE primary source of EV safety information concerning issues related to utility operations.	Safety awareness and emergency preparedness.	$27,342	Allowed	
Information Network.	Source for information on utility EV programs including time-of-use rates, etc.	Customer information source for EV load management in-formation, safety hook-ups, etc.	$45,540	Allowed	
EV Loan program	Collects EV use profile data and assists in designing load management.	Load management, time-of-use, etc.	$36,432	Disallowed	Failure to meet burden of proof: No link to safety, reliability, less costly service
Customer Outreach	Disseminate information to customers and public about EV fleets, rates, load management, etc.	Customer information sources for utility EV load management, safety, energy efficiency, etc.	$72,864	Allowed in part, upon approval of advice letter that links programs to safe, reliable or less costly utility service.	

IV. Reporting Requirements

Commencing 90 days from the effective date of this decision, and continuing every 90 days thereafter, the IOUs shall file and serve the IOU Low-emission Vehicle (LEV) Programs Quarterly Report, using the form attached hereto as Appendix A, covering the previous 90-day period of program activity.

The Quarterly Report requires that the IOUs identify how each program activity relates to safety, reliability or less costly gas or electric service, report on how many people were served, submit program materials, and otherwise establish that they are meeting the requirements of D.95-11-035 and this decision.

V. Comments on Proposed Decision

The proposed decision of the Principal Hearing Officer in this matter was mailed to the parties in accordance with Section 311(d) of the Public Utilities Code and Rule 77.1 of the Rules of Practice and Procedure. Timely comments and reply comments were filed by the parties. We have reviewed the comments filed by the parties and made changes throughout this decision as appropriate.

VI. Assignment of Proceeding

Carl Wood is the Assigned Commissioner and Myra Prestidge is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Although there are currently a small number of LEVs on the roads, the number of LEVs in operation in the state will most likely increase because of regulatory requirements, such as the EPAct, proposed new CARB regulations, and the CEC's Petroleum Reduction Plan.

2. Existing LEV technology includes electric vehicles (EVs) and natural gas vehicles (NGVs).

3. New LEV technologies, including plug-in hybrids that plug directly into the grid and fuel cell vehicles, which are fueled by hydrogen, are currently being developed.

4. Most of the LEVs in operation in the state are operated as part of fleets pursuant to the EPAct and other regulatory requirements.

5. The IOUs have the following fueling stations for LEVs, only some of which are public access stations:

- SoCal Gas has 20 or 21 NGV fueling stations. Fourteen stations are open to the public. SDG&E has three fueling stations.
- PG&E has 22 NGV stations.
- SCE has no NGV fueling stations because it is an electricity-only utility.

6. Our previous decisions have authorized ratepayer funding of IOU LEV programs that directly benefit ratepayers in the form of safer, more reliable, or less costly utility service and that do not unfairly compete with non-utility enterprises in the marketplace.

7. IOU LEV programs generally break down into four key areas: a) customer education and training, b) evaluating the effects of LEV technology on utility systems; c) safety training, and d) research and development (RD&D) and technology application assessments.

8. The California Energy Commission (CEC) has asked the Commission to coordinate regarding LEV policies as part of implementation of the state's energy master plan.

9. The IOUs' LEV safety programs directly benefit ratepayers and relate to the IOU's provision of safer and more cost-effective utility service.

10. The following IOU customer education and training programs directly benefit ratepayers and relate to the provision of safe, reliable, and less costly utility service: a) providing information regarding electric and natural gas pricing and applicable rates and tax credits available for LEVs, b) communications with regulators and the LEV industry regarding the impact of existing and proposed LEV regulations on utility systems; c) providing information regarding the fueling of new and existing LEV technology; d)

training and consultation regarding the design and operation of EV charging and NGV stations to ensure safe and efficient operations; e) training of mechanics in safe and efficient fueling or recharging of LEVs and applicable codes or standards; f) industry support and maintaining contacts with governmental agencies, the auto industry, and other groups and coalitions concerned with LEV technology as necessary to keep abreast of the issues and developments in LEV technology that affect the IOUs ability to provide safe, reliable, and less costly utility service.

11. PG&E may obtain funding for the above customer education and training programs by filing an advice letter that more specifically describes the programs, breaks down the funding for each individual program, and demonstrates the relationship of the programs to the provision of safe, reliable and less costly utility service.

12. The following IOU customer education and training programs may have general environmental or social benefits but do not benefit ratepayers as ratepayers and therefore do not qualify for LEV funding: a) SCE's vehicle loaner program; b) information regarding available LEV models, proposed new LEV technology, and used LEVs, except as related to safe fueling or charging; c) emissions information; d) information regarding grants and other sources of funding for LEVs and the construction of stations; e) education of fleet and individual customers regarding LEV regulatory requirements, except as related to safe and efficient fueling or recharging of LEVs.

13. Most fleet operators are public agencies, such as transit districts, school bus operators, and the U. S. Navy, funded by ratepayer tax dollars, as well as shuttle-ride operators, utilities and taxicab companies acting in response to statutory or air quality management district regulatory requirements.

14. Although there are consultants in the marketplace who can provide information on LEV regulatory requirements for a fee, individual customers who wish to purchase LEVs may not be able to afford consultants.

15. CARB and the CEC do not have sufficient resources to take over all customer education and training programs provided by the IOUs.

16. The IOUs' applications for funding of customer education programs are not sufficiently specific for us to be able to approve customer education and training programs without the IOU's filing supplementary advice letters with the Commission Energy Division.

17. The INEEL project involves a partnership of PG&E, SoCal Gas, CEC, and the Department of Energy's Idaho National Engineering and Environmental Laboratory Project (INEEL) to demonstrate of a small scale natural gas liquifier connected to PG&E's pipeline.

18. PG&E developed a business plan for development of the natural gas liquifier.

19. PG&E and other INEEL partners intended to develop the natural gas liquifier for commercial use.

20. PG&E used ratepayer LEV funds to finance its participation in the Ineel project in contravention of
D. 95-11-035.

21. The natural gas liquifier used in the INEEL project competes with other liquifier products in the marketplace.

22. PG&E and SoCal Gas improperly spent ratepayer funds on the INEEL project in the past by relying on fund shifting without applying to the Commission for authorization to use ratepayer LEV funds for this purpose.

23. PG&E's participation in the California Fuel Cell Project involves hosting a site for demonstration of the prototype fuel cell vehicle, as well as pursuing RD&D related to electrolysis-based hydrogen fueling for fuel cell vehicles.

24. PG&E's participation in the Fuel Cell Project directly serves ratepayer interests by giving PG&E an opportunity to assess the impact of fuel cell vehicles on its utility system, including pipelines.

25. PG&E's application for funding of its Small Scale EV Charging Architecture project, which involves a joint effort with other industry stakeholders to develop a common charging system for different types of EVs and electrically propelled products appears to directly benefit ratepayers, but is not sufficiently specific for us to authorize funding in this decision without the filing of an advice letter.

26. PG&E may obtain funding for its Small Scale EV Charging Architecture Project by filing an advice letter which further describes the program and its relationship to the provision of safer, more reliable, or less costly utility service, for approval by the Commission Energy Division.

27. Although SoCal Gas' proposed RD&D projects (other than the INEEL project) appear to directly benefit ratepayers, SoCal Gas' application is not sufficiently specific for us to authorize funding in this decision without the filing of an advice letter.

28. SoCal Gas may obtain funding for its proposed RD&D projects (other than the INEEL project) by filing an advice letter which more specifically describes the programs and their relationship to the provision of safer, more reliable or less costly utility service for approval by the Commission Energy Division.

29. The IOU's applications for LEV activities that enhance system reliability are not sufficiently specific for us to approve in this decision without the filing of an advice letter.

30. The IOU's may obtain funding for LEV activities that enhance system reliability by filing an advice letter that more specifically describes these programs and their relationship to the provision of safer, more reliable or less costly utility service, for approval by the Commission Energy Division.

Conclusions of Law

1. Pub. Util. Code § 740.3 requires the Commission to coordinate with the State Energy Conservation Commission, the State Air Resources Board, air quality management districts and air pollution control districts and the motor vehicle industry in order to evaluate and implement policies to promote development of equipment and infrastructure needed to facilitate use of electric power and natural gas to fuel LEVs.

2. Pub. Util. Code § 740.3 et seq. prohibits the Commission from passing funding for LEV programs through to ratepayers unless the programs directly benefit ratepayers.

3. Ratepayers should not fund IOU LEV programs unless such programs produce direct benefits that are specific to ratepayers in the form of safer, more reliable, or less costly gas or electrical service.

4. The IOUs bear the burden of proof in these proceedings. To the extent they cannot prove that their ratepayer-funded LEV programs provide direct ratepayer benefits, the Commission must disallow the funding

5. Utilities' LEV programs may not unfairly compete with non-utility enterprises or interfere with the development of a competitive market.

6. D.95-11-035 prohibited ratepayer funding to develop products for commercial use and to market LEVs.

7. D.95-11-035 and D.98-12-098 made clear that ratepayer funding of LEV programs would not continue indefinitely.

8. D.02-12-056 made clear that we would be considering only "discretionary" LEV program activities, such as customer service, training, research and development and other "non-mandatory" LEV programs, in this proceeding. This decision acts only on the IOUs' discretionary funding requests.

9. D.02-12-056 provided that we would review "mandatory" LEV program activities in each utility's GRC or cost-of-service proceeding. "Mandatory" LEV activities involve the acquisition of alternative fuel use fleet vehicles pursuant to federal law, operation and maintenance costs associated with use of alternative fuel use fleet vehicles and associated infrastructure, infrastructure (fueling facilities and related equipment) needed to support alternative fuel use fleet vehicles, employee training and instruction necessary for the use of alternative fuel use fleet vehicles, and accounting for the costs of these mandatory activities. These activities are outside the scope of this decision.

10. We cannot approve utility LEV programs solely because they may help improve air quality or reduce emissions.

11. The test for continued funding of the IOUs' discretionary programs should not depend on whether the market is mature and self-sustaining.

12. PG&E's and SoCalGas' use of ratepayer LEV funds for the INEEL project violates the guidelines stated in D.95-11-035.

13. The use of regulated monopoly funds for the development of a private business in the LEV market raises the potential for unfair competition.

14. While Pub. Util. Code § 890 Public Purpose Program surcharge revenue could possibly be an appropriate funding source for some LEV IOU programs that have general environmental or societal benefits but do not directly benefit ratepayers, we cannot decide that issue here because the record before us is limited to LEV program expenditures.

15. We should deny the IOUs' request to incorporate discretionary LEV funding into their GRCs or cost-of-service proceedings.

O R D E R

IT IS ORDERED that:

1. We grant in part and deny in part the applications by Southern California Gas Company (SoCalGas), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and Pacific Gas and Electric Company (PG&E) (collectively, utilities or IOUs) for funding for the discretionary aspects of their Low-emission Vehicle (LEV) programs as stated in this decision and as set forth below.

SoCalGas			
Item	**Requested Funding (annual)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
Safety and infrastructure training Other customer education	$135,000 $196,000	Allowed in part, subject to advice letter approval	
NGV R&D	$935,000	Allowed in part, subject to advice letter approval	
Subtotal SoCalGas	$2,035,000		
SDG&E			
Safety and infrastructure training	$61,000	Allowed	
Tariff availability and eligibility and Interconnection services	$88,000	Allowed	

Subtotal SDG&E	$889,000		
Total SoCalGas / SDG&E	$2,924,000		

PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
Customer Education		**$2.635**		
I. LEV Vehicle Safety and Infrastructure Training	Fueling, Vehicle, and Infrastructure Safety training for PG&E employees as well as outside fleet operators and individuals	$0.496	Allowed	
II. LEV Technology and Infrastructure Introduction; Regulatory Requirements and Funding Availability Education; Emissions Benefits; and Industry Participation	Matching technology with PG&E fleet requirements; participating on LEV industry boards to ensure coordination and non-duplication of efforts; sharing "learnings" with customers	$1.799	Allowed in part, subject to advice letter approval	
III. PG&E Tariff Availability and Eligibility; and Inter-connection Services	Answer customer inquiries regarding applicable LEV-related gas and electric tariffs, including use of off-peak electric rates to minimize peak	$0.340	Allowed	
RD&D		**$1.348**		
IV. Small Scale Natural Gas Liquefier Demonstration		$0.624	Disallowed	Commercial product
V. Small Specialty EV Charging Architecture Development	Support development of common, global charging systems for	$0.184	Allowed subject to advice letter	

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PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
	on-road and off-road EVs			
VI. Fuel Cell Vehicle Station Demonstration	Provide support for a natural gas-to-hydrogen reformer demonstration by the CA fuel cell partnership to ensure safety and understand utility-specific system impacts and load management implications for the future	$0.540	Allowed	
Technology Application Assessment		**$1.043**		
VII. Distribution System Load Impact Assessments	Evaluate EV and NGV load additions to minimize costs to distribution system	$0.550	Allowed, subject to advice letter approval	
VIII. Safety Codes and Standards Support	Minimize utility compliance costs and protect utility and customer interests as EV and NGV codes and standards are developed	$0.089	Allowed	
IX. LEV Performance Assessments	Determine actual field performance of LEV technology in PG&E fleet applications to ensure safety and to lower fleet costs; share "learnings" with customers	$0.299	Disallowed	Determining performance of PG&E's fleet relates to a "mandatory LEV program" that should be reviewed in GRC. Sharing

PG&E				
Program Activities	**Program Description**	**$ (Million)**	**Allowed/ Disallowed**	**If Disallowed, Reason**
				information with customers not related to safe, reliable or less costly utility service
X. Participate in Others' LEV Demonstrations	Gather LEV related performance knowledge through project cost-sharing, to reduce PG&E fleet	$0.105	Potentially allowed, subject to advice letter	

SCE					
Activities Related To:	**Utility Role**	**Ratepayer Benefit**	**Budget**	**Allowed/ Disallowed**	**If Disallowed, Reason**
Emergency response to EVs	SCE primary source of EV safety information concerning issues related to utility operations.	Safety awareness and emergency preparedness.	$27,342	Allowed	
Information Network.	Source for information on utility EV programs including time-of-use rates, etc.	Customer information source for EV load management in-formation, safety hook-ups, etc.	$45,540	Allowed	
EV Loan program	Collects EV use profile data and assists in designing load	Load management, time-of-use, etc.	$36,432	Disallowed	Failure to meet burden of proof: No link to safety,

SCE					
Activities Related To:	**Utility Role**	**Ratepayer Benefit**	**Budget**	**Allowed/ Disallowed**	**If Disallowed, Reason**
	management.				reliability, less costly service
Customer Outreach	Disseminate information to customers and public about EV fleets, rates, load management, etc.	Customer information sources for utility EV load management, safety, energy efficiency, etc.	$72,864	Partially allowed, upon approval of advice letter that links programs to safe, reliable or less costly utility service.	

2. The IOUs shall file quarterly reports on LEV program expenditures utilizing the forms attached as Appendix A, beginning 90 days after the effective date of this decision.

3. For each approved IOU program, we extend funding for the period for which the IOU requested funding only.

4. The LEV funding approved for SoCalGas and SDG&E in this decision covers the period from 2002 through 2003 or until our approval of decisions in the cost of service proceedings for these IOUs, whichever occurs first.

5. The IOUs shall file advice letters required to obtain funding for certain LEV programs, as stated in this decision, within 60 days of the effective date of this order for approval by the Commission Energy Division consistent with this order.

6. To the extent the IOUs have included requests for mandatory funding in their applications – even interim funding pending the outcome of their general rate cases (GRCs) or cost-of-service proceedings – we do not act on them here. They must seek interim funding in those other proceedings.

7. PG&E's and SoCalGas' past spending on the Idaho National Engineering and Environmental Laboratory (INEEL) project violates the Commission's proscription of LEV ratepayer funding for new commercial products. These IOUs shall make their respective LEV balancing accounts whole with shareholder funds.

8. We deny funding for PG&E's and SoCalGas' participation in a natural gas liquifier project demonstration (the INEEL project) because this project involves development of a commercial product with ratepayer funds, in contravention of our previous decisions.

9. We deny the request of the Southern California Generation Coalition (SCGC) and the Office of Ratepayer Advocates (ORA) to shift funding for LEV research and development (RD&D) to Pub. Util. Code § 890 public purpose surcharge funding.

10. This proceeding is closed.

This order is effective today.

Dated ___________________, at San Francisco, California.

APPENDIX A

IOU Low-emission Vehicle (LEV) Programs
Quarterly Reports Narrative Template

How and To Whom to Submit Quarterly Reports

- **To the CPUC Energy Division:** You must send both hard copies and electronic submittal
  - **Hard Copies to CPUC:**
    - 3 printed copies (at least one unbound) of the Quarterly Report Narrative and the Quarterly Report Workbook (You need only print areas with cells containing data)
    - **Attachments:** 2 copies of all materials and sample forms used in the program
    - Send hard copies and attachments to:
      Energy Division Director
      California Public Utilities Commission
      505 Van Ness Avenue, 4th Floor
      San Francisco, CA 94102

- **To the Service List (e-mail only)**

You should download and use the current service list each time you serve. The current list is available at http://www.cpuc.ca.gov/published/service_lists/A0203047_39807.htm

- ***Notification of Availability*** of your Quarterly Report.
  - Your e-mail notification subject heading should follow the naming convention described below:
    - Low-emission Vehicle Quarterly Report [program implementer name] [quarter covered by report].
  - Your e-mail notification body should contain the following
    - Description of what is being made available
    - Instructions on how to obtain the quarterly report electronically or by mail.
    - URL or Hyperlink to the section of your webpage where the report is posted.

IOU Low-emission Vehicle (LEV) Programs
Quarterly Reports Narrative Template

Program Implementer Name:	
Quarter:	
Period Covered by this Report:	

Section I. Program Overview

Provide a brief description of LEV program activities for the quarter (one or two paragraphs)

Section II. Program Summary Data

Provide a list or table that summarizes program budget, expenditures, goals and achievements by end of reporting period. The list or table should include the following, as applicable:

1. Program Expenditures

- Total program budget and total expenditures by end of reporting period (actual and committed displayed separately and totaled)

2. Safety Related Expenditures

For each safety related activity, provide the following data:

- A description of each activity (subject matter, delivery method, material **provided**, how it relates to safety, etc.)

- Number and description of persons (*e.g.*, fleet customer, residential customer, **noncore** customer, etc.) to whom safety information delivered

- Number of staff persons involved in each **activity** and time spent on each

- To the **Energy Division** care **of Energy Division Director** submit two copies of all **material**, including but not limited to safety instructions, flyers, brochures, posters, program announcements, newsletters, website posting, websites, etc. (**NOTE:** Websites and website postings need not be printed and sent to ED, but please provide list of URLs and brief description of each website and web posting)

- Quantity produced of each piece of **material**

- Method(s) of distribution and approximate **quantities** distributed by each method

- Expenditures on each activity and totaled

3. Reliability Related Expenditures

For each reliability related activity, provide the following data:

- A description of each activity (**subject** matter, description of how activity relates to reliability of electric or gas system, materials developed or obtained, etc.)

- Number of staff persons involved in each activity and time spent on each

- To the **Energy Division** care of **Energy Division Director** submit two copies of all materials developed or **obtained**, including but not limited to studies or analyses of impact of new LEV technology on load, grid or reliability

- Expenditures on each **activity** and totaled

4. Expenditures for Activity Leading to Less Costly Gas or Electric Service

For each activity that will lead to less costly gas or electric service, provide the following data:

- A description of each activity (subject matter, delivery method, material provided, how it will lead to less costly gas or electric service, etc.)

- Number of staff persons involved in each activity and time spent on each
- To the **Energy Division** care of **Energy Division Director** submit two copies of all materials developed or obtained, including but not limited to studies or analyses of how program activity will reduce rates
- Expenditures on each activity and totaled

5. Other Expenditures

- A description of accomplishments not captured within the foregoing section and how they relate to safer, more reliable, or less costly gas or electrical service.
- A description of each activity (subject matter, delivery method, material provided, how it will accomplish Commission-articulated goals for ratepayer-funded IOU LEV programs, etc.)
- Number of staff persons involved in each activity and time spent on each
- To the **Energy Division** care of **Energy Division Director** submit two copies of all materials developed or obtained, including but not limited to studies or analyses of how program activity will accomplish Commission-articulated goals for ratepayer-funded LEV programs, etc.
- Expenditures on each activity and totaled

Section III. Additional Items

Please use this section to report issues, information and data not included in the main body of the report, but deemed relevant and important by the program implementer. You may organize this section as you see fit.

(END OF APPENDIX A)